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## Patent Abstracts of Japan

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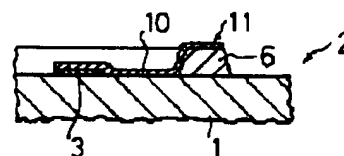
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INT.CL. : H01L 21/321 C23C 14/04

TITLE : HIGH DENSITY BUMP FORMING  
METHOD



ABSTRACT : PURPOSE: To easily form the bump of a conductive circuit in high density by a technique in which a sleeper-like cushion part is formed using photosensitive polyimide in the vicinity of a plurality of pad parts, and a conductive circuit is formed on the region ranging from the surface of each pad part to the surface of a cushion part.

CONSTITUTION: A bump height cushion part 6, having sleeper-like cross section, is formed of photosensitive polyimide in the vicinity of the outside or inside of a plurality of pad parts 3 which are arranged on the circumference of each chip 2 on a wafer 1. Then, after a conductive film has been formed on the whole surface of the wafer 1 by sputtering, a bump 11 is obtained by forming a conductive circuit 10 on the region from the surface of each pad part 3 to the surface of the cushion part 6 by conducting a photo process and an etching treatment on the conductive film. After formation of a cushion part 6 of 20 $\mu$ m in height and 100 $\mu$ m in width, for example, a conductive film is formed by sputtering Ti of 1000 $\text{\AA}$ , Pd of 3000 $\text{\AA}$  and Au of 30002 $\text{\AA}$ , and a conductive circuit 10 is formed by patterning the above-mentioned conductive film, and a bump 11 is obtained.

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